

A NEW SPECIES OF THE GENUS *LESTIGNATHUS* ERICHSON FROM TASMANIA
WITH A NOTE ON THE TASMANIAN SPECIES OF *MECYCLOTHORAX* SHARP
(INSECTA: COLEOPTERA: CARABIDAE: LICININAE, PSYDRINAE)

MARTIN BAEHR

BAEHR, M. 2000. A new species of the genus *Lestignathus* Erichson from Tasmania, with a note on the Tasmanian species of *Mecyclothorax* Sharp (Insecta: Coleoptera: Carabidae: Licininae, Psydrinae). *Records of the South Australian Museum* 33(2): 123–126.

Lestignathus pieperi, sp. nov. is described from Mt Field, southwestern Tasmania. It is distinguished *inter alia* from the three known species of the genus *Lestignathus* by presence of only one setiferous puncture on the 3rd interval. A key to all species of the genus is added.

Recent collections revealed that in Tasmania two species of *Mecyclothorax* occur, namely the well-recorded *M. ambiguus* (Erichson), and *M. punctipennis* (Macleay) that is widespread on the mainland but not previously recorded from Tasmania.

Martin Baehr, Zoologische Staatssammlung, Münchhausenstr. 21, D-81247 München, Germany. Manuscript received 16 May 2000.

INTRODUCTION

Through the kindness of Dr Harald Pieper (Kiel) I received a sample of Tasmanian Carabidae for identification that he collected mainly in western Tasmania during a trip in December 1998. This sample included, *inter alia*, a new species of the licinine genus *Lestignathus* Erichson, as well as the first Tasmanian record of the psydrine species *Mecyclothorax punctipennis* (Macleay). By courtesy of Dr Eric Matthews, Adelaide, I had the opportunity to compare types or material of all described species of *Lestignathus* stored in the collection of the South Australian Museum.

So far, the genus *Lestignathus* Erichson includes three rather different species (Sloane 1920, Moore *et al.* 1987) that all occur in Tasmania, namely the common and widespread, large *Lestignathus cursor* Erichson, and the apparently much rarer, smaller species *L. foveatus* Sloane and *L. simsoni* Bates. The new species differs from all described species in several respects, hence description of the single known specimen seems advisable, the more so as all species of *Lestignathus*, except for *L. cursor*, apparently are rare or very rare, and additional material is unlikely to be detected soon.

MEASUREMENTS

Measurements have been made under a stereo microscope by use of an ocular micrometer.

Length has been measured from apex of labrum to apex of elytra. Length of pronotum was taken from the most advanced tip of anterior angles to the most advanced part of base. Width of base was taken at position of the posterior marginal setae. Measurements, therefore, may slightly differ from those of Sloane (1920).

LOCATION OF TYPES

To facilitate further study of the genus *Lestignathus*, the holotype of *L. pieperi* sp. nov. is presented to the South Australian Museum. Therefore, the types of three of the four recorded species of the genus *Lestignathus* are assembled in that collection which also holds historical material of the fourth species.

Lestignathus pieperi sp. nov.
(Figs 1–2)

Holotype: f, TAS, Mt Field Lyrebird Nat. Walk 30.11.1998 leg. H. Pieper (SAMA).

Diagnosis

Distinguished from all other species of the genus *Lestignathus* by presence of only 1 setiferous puncture on 3rd elytral interval. Further distinguished from *L. cursor* Erichson by much lesser size; from both, *L. foveatus* Sloane and *L. simsoni* Bates, by less cordate, anteriorly much

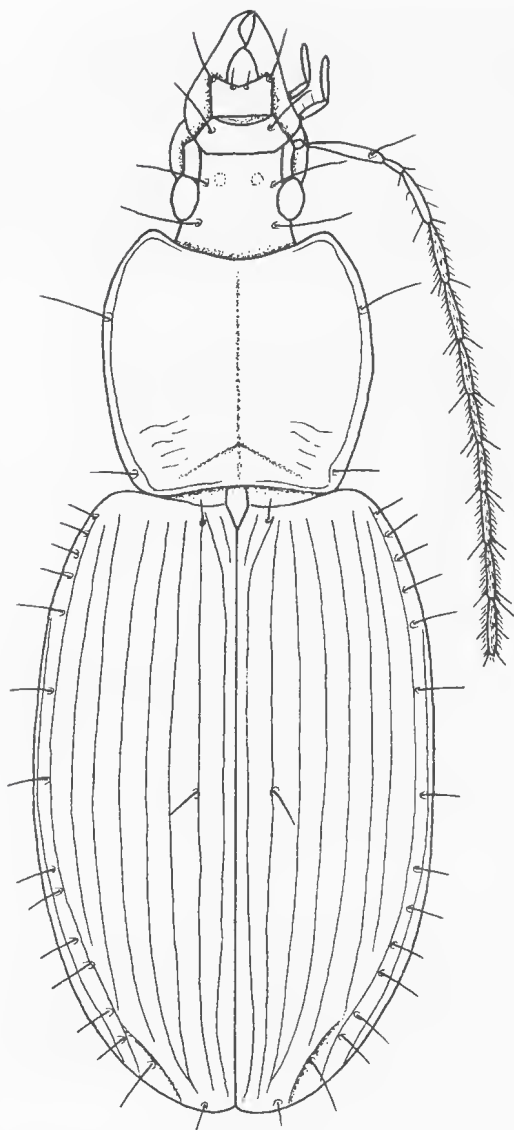


FIGURE 1. *Lestignathus pieperi* sp. nov. Habitus. Length: 7.55 mm.

narrower pronotum, almost completely depressed elytral intervals, and narrower head which is less than half as wide as pronotum; and from latter species also by slightly lesser size.

Description

Measurements. Length: 7.55 mm; width: 3.0 mm. Ratios: width/length of pronotum: 1.06; width base/apex of pronotum: 1.37; width pronotum/head: 2.08; length/width of elytra: 1.59; width elytra/pronotum: 1.52.

Colour. Piceous-black, pronotum and elytra with narrow reddish margins; labrum and mouthparts red, clypeus reddish-piceous, basal and apical antennomeres reddish, median antennomeres piceous, femora and tibiae in middle reddish-piceous, basally and apically lighter, tarsi light reddish. Lower surface black.

Head. Very small in comparison to prothorax. Eyes large though laterally little produced, with small orbits. Clypeus bisetose, anterior central part of clypeus membranous. Labrum medially deeply, symmetrically v-shaped, excised for about a third of its length, quadrisetose. Mentum with an indistinct, slightly triangular tooth, ligula bisetose, glossa and paraglossae of about equal length. Lacinia with elongate tooth at end, median border with dense fringe of stiff setae. Palpi rather slender and elongate, apical palpomeres thickened, both terminal palpomeres extremely sparsely pilose. Both mandibles bidentate, though lower tooth of right mandible more acute than that of left mandible, therefore apical excision in right mandible about quadrate, in left mandible more semicircular. Clypeofrontal suture very shallow, straight. Frons convex, near clypeal suture with shallow, rather irregularly shaped impression on either side. Both supraorbital pores very large. Frons impunctate, with distinct, isodiametric microreticulation. Antenna slender and elongate, surpassing anterior third of elytra, median antennomeres $> 4 \times$ as long as wide, two basal antennomeres glabrous, 3rd antennomere sparsely pilose, the following antennomeres densely pilose.

Prothorax. Slightly wider than long, laterally fairly convex, more than twice as wide as head, widest slightly in front of middle. Apex in middle deeply excised, anterior angles prominent, at apex rounded off. Lateral margin in basal half almost straight. Base distinctly concave in middle, basal angles widely rounded off. Apex and lateral borders with narrow though distinct margin, base in middle not margined. Median line distinct though shallow, almost complete. Anterior and posterior transverse impressions barely indicated. Basal impressions large, wide, with an elongate, linear impression in median part. Disk rather depressed, near basal angles widely explanate, rather even. Disk without any wrinkles or punctures, with distinct, more or less isodiametric microreticulation. Anterior marginal seta situated slightly behind anterior third, well in front of widest diameter, slightly removed from margin. Posterior marginal seta situated a short distance in front of basal angle, close to margin.

Elytra. Elongate-ovalish, widest about at

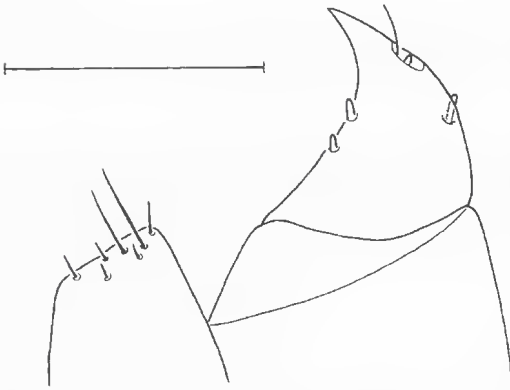


FIGURE 2. *Lestignathus pieperi* sp. nov. Female stylomere 2 and base of stylomere 1. Scale line: 0.25 mm.

middle, surface moderately convex, considerably wider than prothorax. Humeri barely projecting, basal and lateral margins meeting without any angle. Lateral margin evenly rounded to apex, slightly incurved at the very tip. Striation complete, striae well impressed, very faintly crenulate, intervals gently convex. Scutellar stria elongate, scutellar pore present. 3rd interval with a setiferous puncture in about middle, puncture attached to 2nd stria. Marginal series consisting of 13–14 large punctures that are more widely spaced in middle. Two additional punctures situated preapically and apically at 7th stria. Intervals impunctate, with highly superficial, transverse microreticulation, rather glossy. Wings reduced.

Lower surface. Impunctate. Metepisternum about as long as wide. Terminal abdominal sternite in female with 4 setae on either side.

Legs. Slender and elongate. Structure of male anterior tarsus unknown. Metatibia almost straight. Metatarsus very slender. 5th tarsomeres of all legs slender, lower surface setulose.

Male genitalia. Unknown.

Female genitalia (Fig. 2). Both stylomeres markedly depressed, foliaceous. Stylomere 2 short and wide, triangular, with short, acute apex, laterally with 2 very short latero-ventral ensiform setae, mediodorsally with a moderately short dorso-medial ensiform seta, on median rim near apex with a nematiform seta originating in a large groove. In middle of the groove with a small tubercle. Apex of stylomere 1 without any setae. Lateral plate conspicuously triangular at apex, with a 2–3 elongate and some very short nematiform setae at apical rim.

Variation. Unknown.

Distribution. Mt Field, southwestern Tasmania. Known only from type locality.

Collecting circumstances. Collected on the ground in temperate rain forest. The holotype was captured together with *Lestignathus cursor* Erichson.

Etymology. The name is a patronym in honour of the collector Dr Harald Pieper.

Relationships

The sparsely setulose 3rd antennomere and the presence of both marginal pores on the pronotum place this species in the genus *Lestignathus* Erichson, although externally it resembles species of the related genus *Lacordairia* Castelnau.

Because the male genitalia of this species are not yet known and two of the three other species of *Lestignathus* are apparently very rare, nothing can be said about relationships of this species, which is unique within the genus by the presence of a single elytral puncture only. Certainly, all species of the genus differ remarkably in certain external characters.

KEY TO THE SPECIES OF *LESTIGNATHUS* ERICHSON

1. — Size larger, body length >12.5 mm; elytra with 2 non-foveate punctures, at apex not deeply sinuate *cursor* Erichson
 - Size smaller, body length <10 mm; elytra either with foveate punctures, or with 1 puncture only, or at apex deeply sinuate 2
2. — Each elytron with 3–4 foveate punctures ..
..... *foveatus* Sloane
 - Each elytron with at most 2 non-foveate punctures 3
3. — Size larger, body length >9 mm; each elytron with 2 setiferous punctures, apex of elytra deeply sinuate *simsoni* Bates
 - Size smaller, body length c. 7.5 mm; each elytron with 1 setiferous puncture, apex of elytra barely sinuate *pieperi* sp. nov.

Mecyclothorax punctipennis (Macleay)

Moore 1984: 162; Moore *et al.* 1987: 149.

The material collected recently by H. Pieper in Tasmania includes a male specimen of *Mecyclothorax punctipennis* (Macleay) besides

specimens of the well known *M. ambiguus* (Erichson). The identity of *M. punctipennis* has been confirmed by dissection of the male genitalia and by comparison with genitalia of the Tasmanian *M. ambiguus*, moreover by comparison with the figures in Moore (1984). Data for this specimen are: TAS, Rocky Cape NP, 22.11.1998, leg. H. Pieper.

This is the first Tasmanian record of this

species which is common and widespread on the mainland (Moore *et al.* 1987).

ACKNOWLEDGMENTS

My sincere thanks are due to Dr H. Pieper (Kiel) for kindly submitting his interesting material for identification, and to Dr E. Matthews (Adelaide) for the kind loan of types and material for comparison.

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